



Fly Like An Eagle

The Bald Eagle is a majestic bird that can be seen soaring over our council. Even more impressive than its beauty is the way it has been making a comeback after being on the Endangered Species list. Follow along on the eagle's journey!

Steps

1. Exploring Eagles
2. Taking Flight
3. The World of the Eagle
4. Observe Eagles
5. Spread Awareness

Purpose

When I've earned this patch, I will know about what makes bald eagles special and what we can do to help and protect them!



Every step has three choices.
Make ONE choice to complete each step.
Inspired? Do more!



Step 1 Exploring Eagles

Eagles are unique creatures with a lot of meaning and a fascinating history. With an adult, look for books, videos, exhibits, or websites to learn all about the Bald Eagle.

Choices - Do One:

☐

Get the Bird Facts Learn about what exactly an eagle is! Explore how big they are, where they live, and what traits make them stand out.

OR 

☐

Back from the Brink Explore what caused the eagle to be in danger and end up on the Endangered Animals list and how people worked to help protect them.

OR 

☐

A Soaring Symbol You know that the eagle often represents the United States, but do you know why? Look into what the eagle symbolizes to different groups of people and think about what it means to you when you see one.

Fully Feathered!

The name bald eagle comes from the white feathers on their head. Bald comes from the old English word, "balde," meaning white, not someone thinking they were bald.

Did you know? Benjamin Franklin wanted the turkey to be the emblem for the United States instead of the eagle because he didn't like that Bald Eagles were scavengers.



Endangered Species List



What is the Endangered Species Act?

The Endangered Species Act (ESA) was passed in 1973 and provides a program to protect plants and animals and the habitats in which they are found.

This act defined what it meant for a species to be threatened or endangered. It also provides funding to protect species and their habitats and restricts hunting of any animals that they list.



Endangered Animals in the US

- Hawaiian Monk Seal
- Red Wolf
- Gray Bat
- Iowa Pleistocene snail
- Rusty patched bumble bee
- Sheepsnose Mussel
- Whooping Crane
- Bison
- Brown Bear
- Ocelot
- Sea Otter
- Carolina Northern Flying Squirrel

Eagles: endangered no more!

- 1978** Bald Eagles are listed as endangered in the lower 48 states due to habitat destruction and damage to birds and eggs due to pesticides.
- 1995** Bald Eagles had recovered enough to be reclassified to the less critical threatened level instead of endangered
- 2007** Bald Eagles populations rose enough for them to be removed from the Endangered and Threatened Species List completely thanks to conservation efforts by the ESA!

Step 2 Taking Flight

Eagles are known for soaring through the sky!
Discover more about how they take flight.

Choices - Do One:



Spread your wings: Eagles are one of the largest birds in North America. Their wingspan can range from around 6 to 7.5 feet! Take some paper, string or sidewalk chalk and measure out an eagle's wingspan and then hold your arms out wing and compare your wingspan from finger tip to finger tip and see how they compare to an eagle's.

OR 



What it Takes to Soar Imagine what it would be like to be able to fly high above everything! Build a kite to see what might help an eagle use the wind to stay in the sky as such a large bird. How would its large wings help it stay up in the clouds? Try out different kite designs to see what stays aloft best for you.

OR 



Nature's Super Suit Birds have their own special "coats" that keep them warm and dry. Let's explore how feathers work! Just like you wear different clothes to stay cozy and dry, birds have different types of feathers for the job:

- Down Feathers = Your Sweater: These soft, fluffy feathers trap warm air, like your favorite hoodie keeps you warm.
- Outer Feathers = Your Raincoat: These feathers have a waxy coating that repels water, just like a rain jacket!

Try It!

- Wear a sweater or sweatshirt under a raincoat. Notice how each layer helps protect you from the cold and rain.
- Fill a spray bottle with water and lightly spray your raincoat. Watch how the water beads up and slides off—just like rain on an eagle's outer feathers.

Soaring, Flying

Eagles soaring above are beautiful to watch but as such a large bird they have many adaptations to help them stay up in the air and make it easier to fly.



Built for Flight

- Eagles have hollow bones to help make them lighter to fly
- Contour feathers overlap to make them more aerodynamic and aid in flight.
- A large wingspan allows eagles to spend more time soaring rather than using energy to flap their wings.

Flight Facts!



- Migrating eagles have been tracked going over 60 miles per hour
- While diving, they can reach up to 100 mph.
- Bald eagles have around 7,000 feathers weighing almost 2 pounds!
- Tail feathers are used as rudders to steer in the air.
- Using thermals they can soar over 10,000 ft in the air.

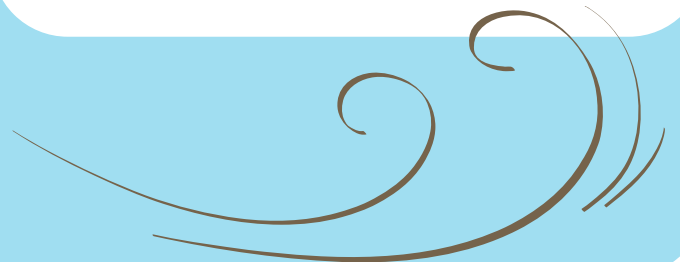
Using the Environment

Thermals

- Warm air is lighter than cold air and can create pockets of air above cooler air below. When they are in these pockets of warm air called a thermal eagles don't need to use much energy to soar.
- A group of eagles using these thermals can look like boiling water and are called a kettle when soaring together.

Air Currents

- Eagles use the air forced upwards when it hits the front of bluffs to gain altitude.



Location, Location, Location

Eagles return to their nests year after year, so it's very important for them to find a good spot. Eagles want a tall perch near waters where they can get food. They can be found in the tallest trees or on cliffs. Nests are built of sticks, grass and stalks and lined with lichen, moss and feathers to create soft place for their eggs.



Eagles can live
up to 30 years
in the wild!

Over 1,300 species are
listed as threatened or
endangered in the US

Step 3 The World of the Eagle

Connect the eagle to the world around them! Learn about where they live, how they interact with the environment or about other endangered animals.

Choices - Do One:



The Best Nest Eagles make the largest nest of any bird in the United States with nests being from 4-6 feet wide typically, but ones have been found that are up to 8 feet wide! Gather up materials to see what it would take to build a nest like an eagle. Build your nest outside with sticks, leaves and moss like an eagle would or try one inside with various blankets and pillows. Whatever it takes to make a nest that would be cozy and safe for eggs!

OR 



An Eagle Eye Eagles have some of the best vision of any animals and can spot prey over 2 miles away! It's no wonder why people will say someone has an eagle eye when they are good at spotting things. Make a view finder, found on the next page, to see how eagles focus in on details while looking far away.

OR 



Board Game Frenzy Create a board game about endangered animals to play with your friends. You can include special spaces (like go back spaces), fun facts and more! Play it with others and see what they learned about endangered animals.



Eagle Eye View Finder

Materials Needed

- Empty paper towel roll
- Construction paper (yellow and black)
- Glue sticks or tape
- Scissors
- Markers or crayons
- Clear plastic wrap or transparency sheets (optional)
- Hole punch
- String or yarn (optional)



Instructions

Decorate the Viewfinder:

- Wrap the paper towel roll with yellow construction paper to represent the color of a bald eagle's beak.
- Use markers to draw details or decorate it as you like.

Create a Human Eye Lens:

- Cut a small circular hole at one end of the roll. This is the "human eyesight" side.
- Cover the hole with a small piece of clear plastic wrap or a transparency sheet, and tape it in place.

Create an Eagle Eye Lens:

- On the opposite end of the roll, cut a slightly smaller circle (to represent the eagle's narrow, focused vision).
- Tape a tiny piece of black construction paper over part of the hole to simulate the sharp focus of an eagle's eyesight.

Add an Optional Neck Strap:

- Use a hole punch to make two holes on either side of the roll.
- Thread string or yarn through the holes and tie it so the viewfinder can hang around your neck.

An eagle can see even with its eyelids shut!

In addition to a normal pair of eyelids, the eagle has a set of clear eyelids that can be closed for protection without affecting the eagle's vision.

Test the Difference in Vision:

- Look through the wide "human" side and observe your surroundings.
- Then, look through the smaller "eagle" side and see how eagles focus on faraway objects more clearly but lose peripheral vision.

A human with perfect eyesight has 20/20 vision. Bald eagles can have 20/4 or 20/5 vision, meaning they can see four or five times farther than the average person.

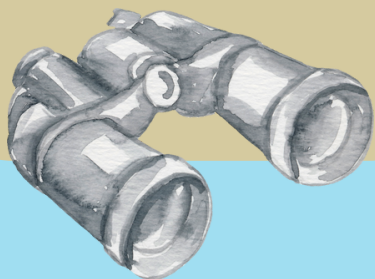




Eagle Ettiquette

Winter is great time to observe eagles in the wild, but we want to make sure be respectful and not to disturb them.

- Stay in your car if possible and 100 yards away.
- While hiking keep a distance of 300 yards.
- Use spotting scopes or binoculars to allow to see the birds well from a distance.
- Don't litter or destroy nature outside to protect the eagles' habitat.
- Remember a Girl Scout leaves a place better than she found it!



Step 4 Go Eagle Watching

Having learned about Bald Eagles, its time to see them for yourself!

Choices - Do One:



Take a Trip Visit a local museum, nature center or bird sanctuary to learn more about eagles: There are many places in Eastern Iowa and Western Illinois and states nearby by exhibits on eagles or eagles to view.

- Bald Eagle Days- Quad Cities
- Bald Eagle Appreciation Days- Keokuk, IA
- National Eagle Center- Wabasha, Minnesota
- National Mississippi River Museum- Dubuque, Iowa
- Iowa Raptor Project- Solon, Iowa
- Swan Lake State Park- Carroll, IA
- Northern Illinois Raptor Rehabilitation and Education Center- Loves Park, IL

OR 



Go for a Hike We are lucky to live in an area where you may be able to spot eagles while out on a hike, especially by the river. Keep in mind to always give birds space.

OR 



Watch an Eagle Cam You can catch a glimpse of eagles without even leaving your home! With an adult's permission follow the links to get an eye at eagle's nest right now! Sometimes you can even see the baby eagles.

- <https://explore.org/livecams/bald-eagles/decorah-eagles>
- <https://explore.org/livecams/bald-eagles/decorah-eagles-north-nest>
- <https://www.arconic.com/eaglecam>

Step 5 Spread Awareness

Share the information about eagles that you've learned and help others learn about protecting this amazing animal and its habitat.

Choices - Do One:

- ☐ Take a Poster Design a poster all about eagles to share with your troop, family or class. Include information you learned about eagles, where they live and how they came back from being on the Endangered Species List.

OR

- ☐ Talk It Up Create a presentation or video with your troop to share information about eagles and protecting them. Get creative by writing a song or skit and perform it for others or with an adults help film it to share with friends and family

OR

- ☐ Take Action Write to someone in the government about why they should work to protect endangered wildlife. Look up who represents you whether at a state level, like a governor or state representative or federal like your senator and congressperson. Eagles have made a come back thanks to people advocating to protect their habitat and you can use your voice to promote the protection of the amazing animals that live in our area.

More to Know

To protect eagles, it is illegal to own any of their feathers, nests, or eggs without a special permit from the Department of the Interior



Rachel Carson

Rachel Carson was an influential biologist and environmental activist in the mid 1900s. Her book *Silent Spring* played a large role in informing the public of the danger pesticides, particularly DDT, and getting people to advocate to ban the use of DDT in the United States and help protect many birds and animals from its harm.